

# New York State Department of Transportation

## Yellow Flag NB22U4W002

By: Malav Shah

Flag Date: November 14, 2022

Superseding Information:

No Flags Superseded

### Structure Information

BIN: 1065318

Feature Carried: 278I278IX2M23027

Feature Crossed: 6TH AVENUE

Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY

County: KINGS

Political Unit: City of NEW YORK

Approximate Year Built: 1962

Posted Load Matches Inventory : Yes

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 322

### Verbal Notification Information

Person Notified: Heinz Joachim, P.E.

Date: November 21, 2022 2:00:00 PM

Of: NYSDOT Region 11

### Signature Information

Signature: Malav Shah, P.E. 106620-1

Date: December 01, 2022

Reviewed By: Robert Kemp

Date: December 01, 2022

Attachments: 8

## Flagged Elements

| Parent Element           | Element                      | Total Quantity | Unit |
|--------------------------|------------------------------|----------------|------|
| <b>Span Number : 168</b> |                              |                |      |
|                          | 107 - Steel Open Girder/Beam | 729            | ft   |
|                          | PR831 - Steel Beam End       | 34             | each |

## Flagged Condition Description

This Yellow Flag No. NB22U4W002 is NEW.

Location: Span 164, Girder G14 at Pier 163 located within scaffolding platforms installed by contractor which is located above parking lot between 38th and 39th Street.

Description:

The Girder G14 end at Pier 163 exhibits severe section loss with 0.21" – 0.36" remaining thickness measured (RTM) in the web shear area along the connection angle resulting in approximately 56% section loss. (Sketch 1, Photos 7 & 8).

Additionally, the connection angle on the right side of the girder exhibits up to 1/8" section loss x full width for 15" from top and 3/8" section loss x full width for remaining height of the connection angle. There is a 2" L x 1/2" H hole with up to 60% section loss in the surrounding 4" L x 1"H area in top of the connection angle. 2 bolts in the lower part of the right connection angle exhibit up to 40% section loss in the bolt head. The connection angle on the left side of the girder exhibits up to 1/8" section loss on entire face of connecting leg.

Refer to Yellow Flag Condition Sketch 1, Photo #2 for more details.

This is a newly flagged condition.

Notes:

1. Adjacent Girder G13 has repair plates in good condition at the Pier 163.
2. Adjacent Stringer S3 has repair plates in good condition at the Pier 163. Stringer S3 supports the railing above and does not take any live load.
4. Scaffolding platform was installed by contractor within the span at the time of inspection so single lane closure in the right lane on 3rd Avenue WB between 36th and 39th streets with 60 ft bucket truck was used to access platform.
5. The previous 2021 Biennial Report documented the above bearing location as CS3 with the following condition state note:  
Girder G14 exhibits up to 40% section loss for the full height of the web for 3" wide adjacent to the connection angles.

**Flag Photographs**

Photo Number: 1

Photo Filename: FRAMING PLAN.jpg

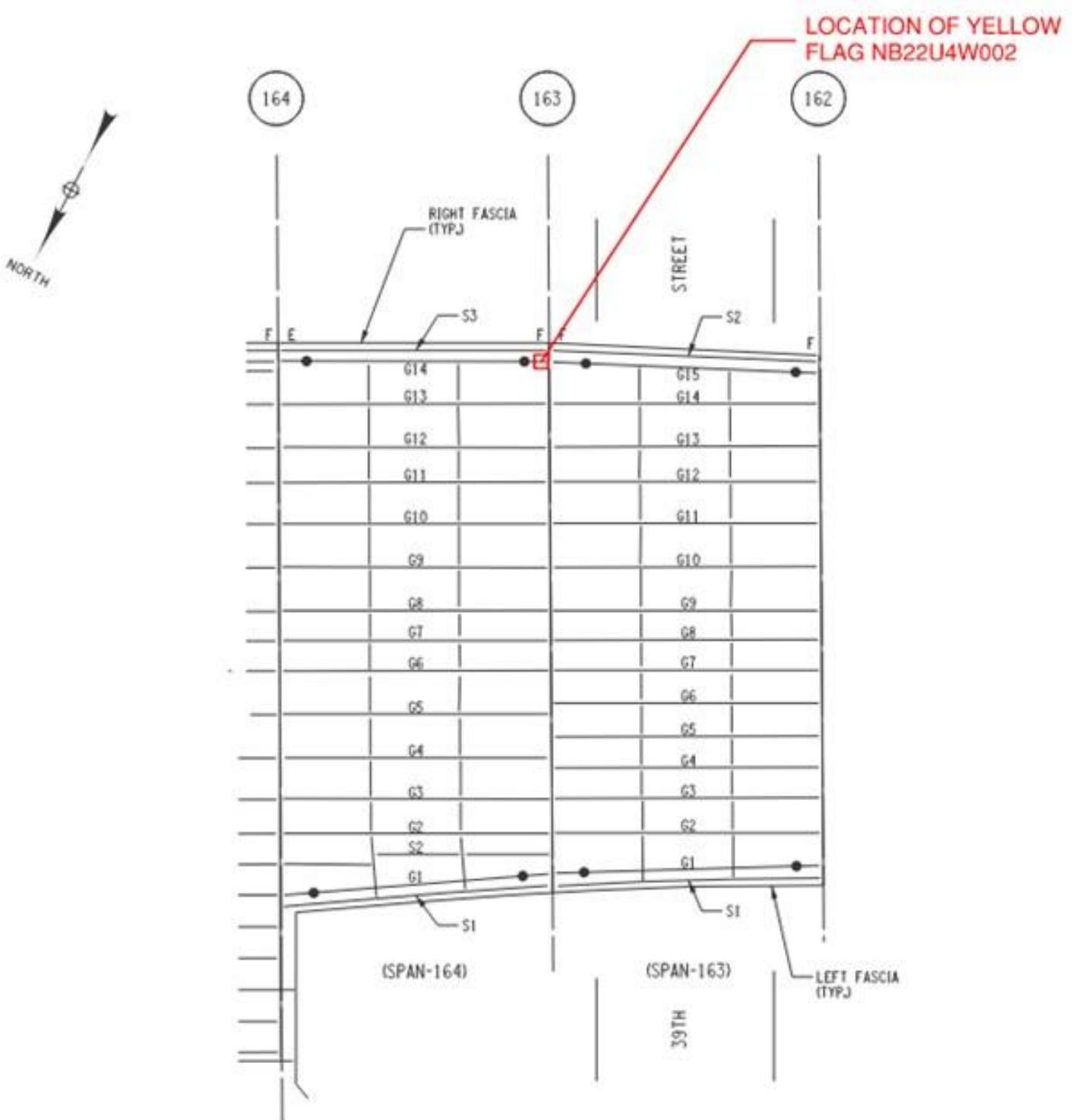
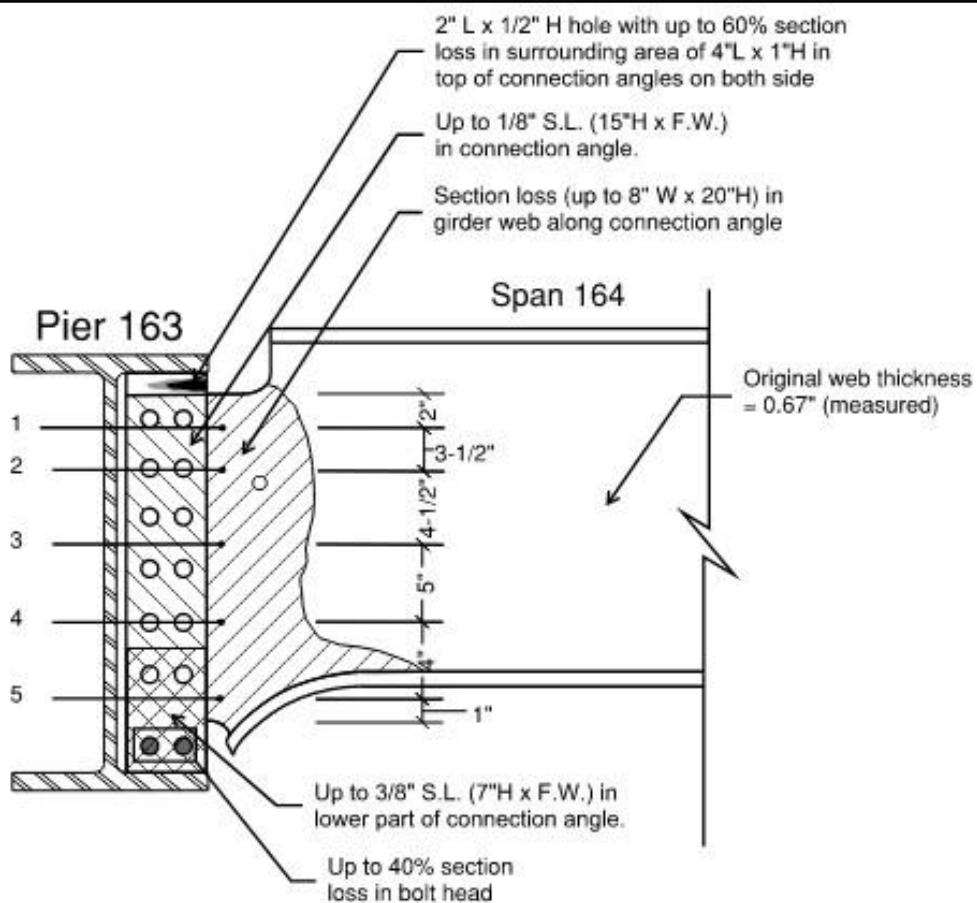
**Attachment Description: YELLOW FLAG LOCATION PLAN**

Photo Number: 2

Photo Filename: SKETCH 1.jpg



**SPAN 164, GIRDER G14 BEAM END  
(LOOKING LEFT)**  
**N.T.S**

| LOCATION | RTM (in.) |
|----------|-----------|
| 1        | 0.28      |
| 2        | 0.33      |
| 3        | 0.27      |
| 4        | 0.36      |
| 5        | 0.21      |

| TRIBUTARY LENGTH CALC. FOR SHEAR AREA |             |             |             |
|---------------------------------------|-------------|-------------|-------------|
|                                       | ABOVE (in.) | Below (in.) | TOTAL (in.) |
| FOR POINT 1                           | 2           | 1.75        | 3.75        |
| FOR POINT 2                           | 1.75        | 2.25        | 4           |
| FOR POINT 3                           | 2.25        | 2.5         | 4.75        |
| FOR POINT 4                           | 2.5         | 2           | 4.5         |
| FOR POINT 5                           | 2           | 1           | 3           |

**Section Loss Calculations:**

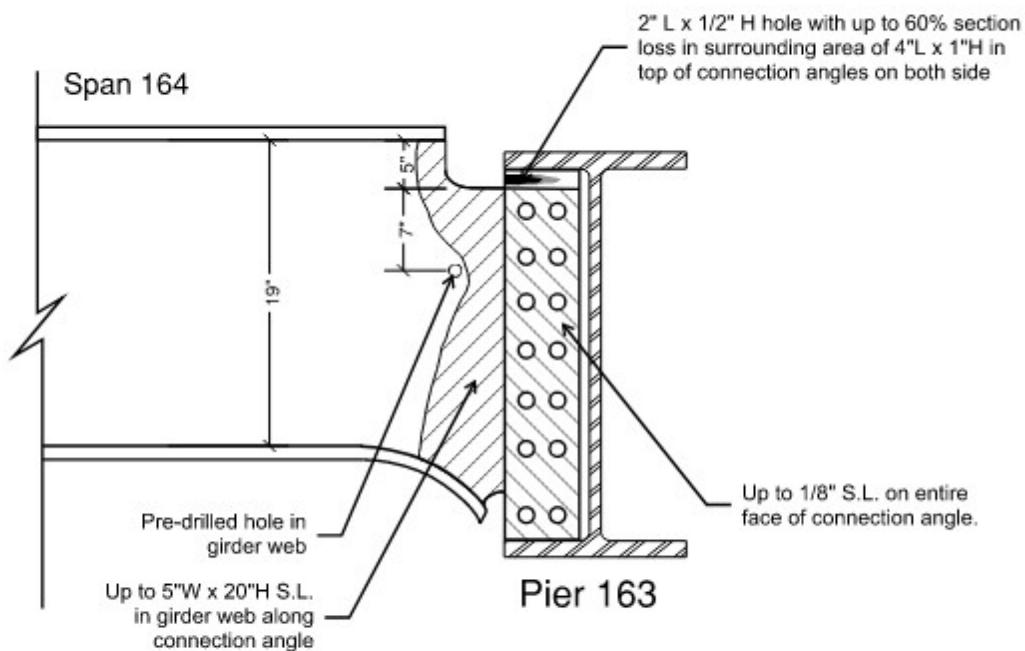
Original girder web thickness = 0.67" (measured)

Shear web area =  $(0.28" \times 3.75") + (0.33" \times 4") + (0.27" \times 4.75") + (0.36" \times 4.5") + (0.21" \times 3") = 5.90 \text{ in}^2$   
Overall shear web area section =  $[(0.67" \times 20") - 5.90 \text{ in}^2] / (0.67" \times 20") \times 100\% = 56\% \text{ section loss}$

***Attachment Description: YELLOW FLAG CONDITION SKETCH 1***

Photo Number: 3

Photo Filename: SKETCH 2\_R.jpg

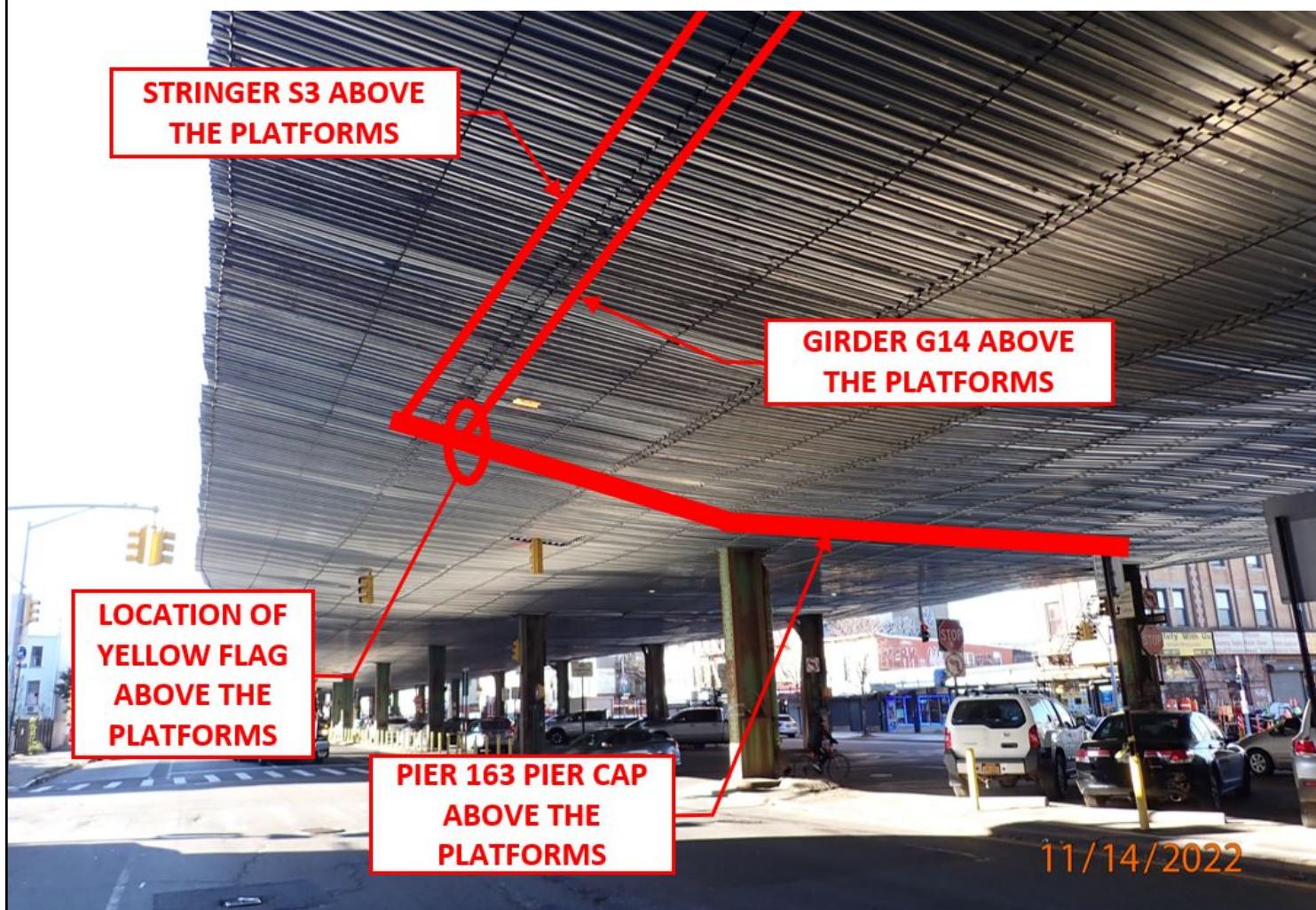


**SPAN 164, GIRDER G14 BEAM END**  
**(LOOKING RIGHT)**  
**N.T.S**

**Attachment Description: YELLOW FLAG CONDITION SKETCH 2**

Photo Number: 4

Photo Filename: GENERAL VIEW.JPG



**Attachment Description:** General view of flagged condition at Girder G14 in Span 164 at Pier 163 (located above the installed shielding platform). Looking Begin - Left

Photo Number: **5**Photo Filename: **GENERAL VIEW RIGHT FACE.JPG**

**Attachment Description:** General view of Girder G14 in Span 164 at Pier 163. Looking Begin and Left.

Photo Number: **6**Photo Filename: **GENERAL VIEW LEFT FACE.JPG**

**GIRDER G14  
LEFT FACE**

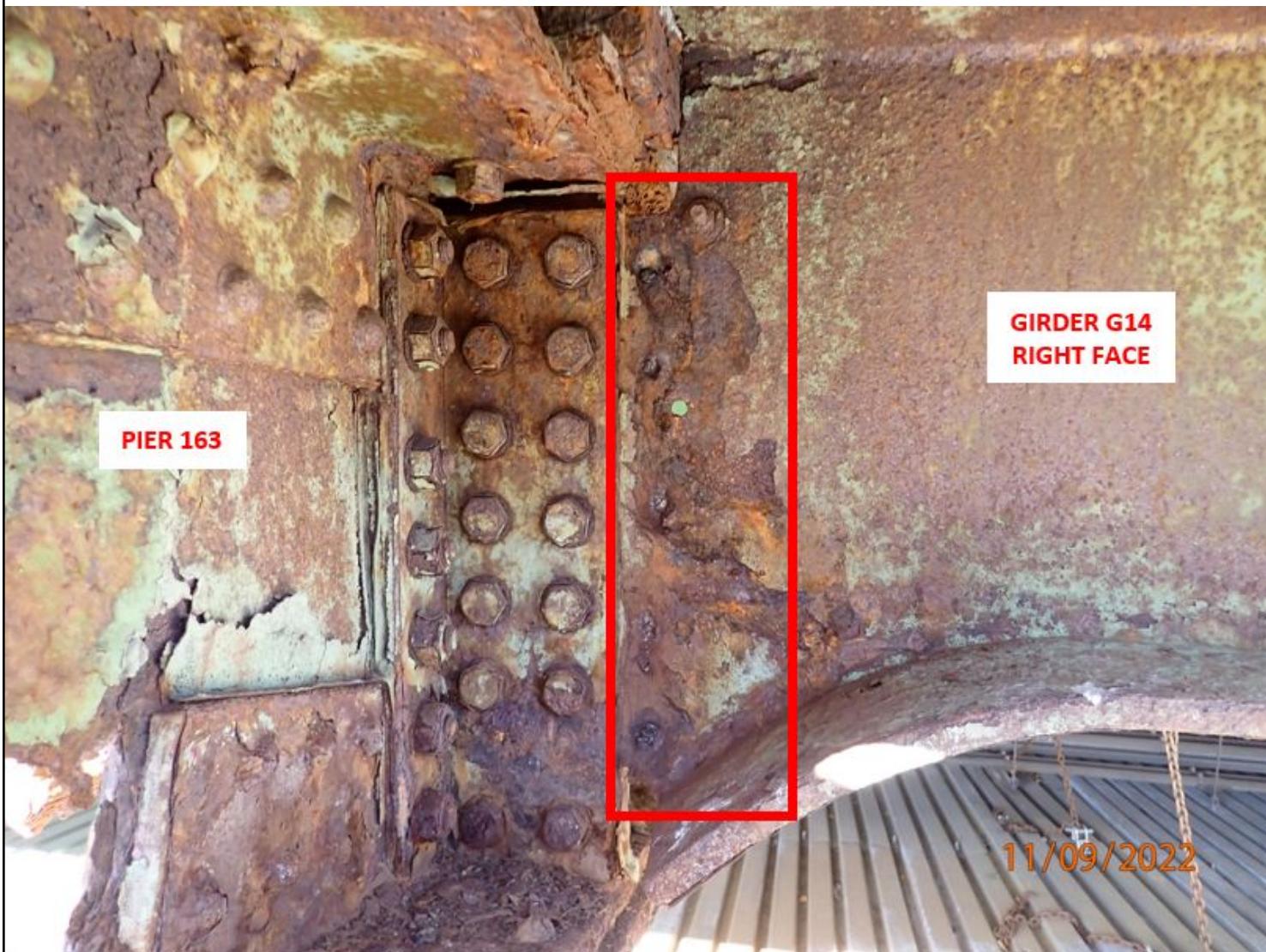
**PIER 163**

**11/09/2022**

**Attachment Description:** General view of Girder G14 in Span 164 at Pier 163. Looking Right.

Photo Number: 7

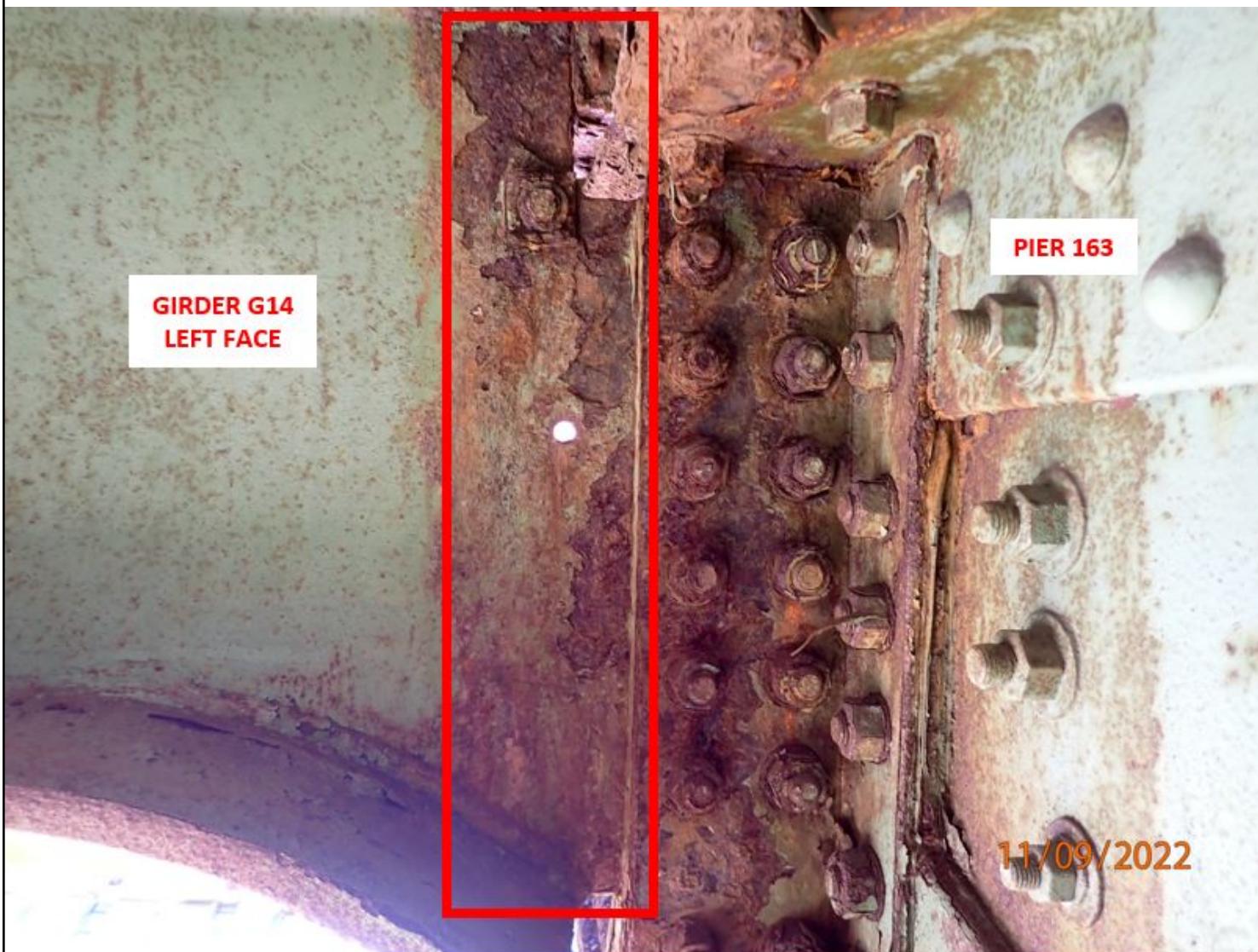
Photo Filename: CLOSEUP VIEW RIGHT FACE.JPG



**Attachment Description:** Right face of Girder G14 in Span 164 at Pier 163. The end of Girder G14 web exhibits severe section loss (approximately 56% section loss) along the connection angle. Additionally, the connection angle exhibits up 3/8" S.L. x F.W. with a 2" L x 1/2" H hole in top of the connection angle. 2 bolts at the base of connection angle exhibit up to 40% section loss in the bolt head. Looking Left

Photo Number: 8

Photo Filename: CLOSEUP VIEW LEFT FACE.JPG



**Attachment Description:** Close-up view of left face of Girder G14 in Span 164 at Pier 163. The end of Girder G14 web exhibits severe section loss (approximately 56% section loss) along the connection angle. Additionally, the connection angle exhibits up 1/8" S.L. x F.W. with a 2" L x 1/2" H hole in top of the connection angle. Looking right.